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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

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*Ex parte* PETER KRENN and ERNST BLAHA

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Appeal 2009-0387<sup>1</sup>  
Application 10/644,408  
Technology Center 3700

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Decided:<sup>2</sup> May 29, 2009

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Before TONI R. SCHEINER, DONALD E. ADAMS, and FRANCISCO C.  
PRATS, *Administrative Patent Judges*.

PRATS, *Administrative Patent Judge*.

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<sup>1</sup> Shuffle Master, Inc., is the real party in interest.

<sup>2</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper delivery) or Notification Date (electronic delivery).

## DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 involving claims to a device for shuffling cards. The Examiner has rejected the claims as anticipated and obvious. We have jurisdiction under 35 U.S.C. § 6(b).

We reverse.

## STATEMENT OF THE CASE

Claims 1-15 and 25-38 stand finally rejected and are on appeal (App. Br. 5). Claims 1, 25, and 35, the appealed independent claims, are representative and read as follows:

1. A device for shuffling cards comprising: a pre-shuffler; and a main shuffler, the pre-shuffler comprising: a plurality of compartments for holding groups of playing cards to be shuffled; and an output portion of the pre-shuffler, the output portion delivering one group of cards at a time to an input portion of the main shuffler, the pre-shuffler delivering groups of cards to an input portion of the main shuffler in a different order than an order inputted into the pre-shuffler, each group of cards being input separately as an entire group, so the main shuffler rearranges the order of cards input into the main shuffler and outputting cards in a substantially random order.
25. A device for shuffling cards comprising:  
a pre-shuffler and a main shuffler, the pre-shuffler comprising:  
a plurality of compartments for holding groups of playing cards to be shuffled;  
an output portion of the pre-shuffler, the output portion delivering one group of multiple playing cards at a single time, without shuffling cards in the one group, to an input portion of the main shuffler,  
the main shuffler being capable of rearranging the order of the groups of multiple cards input into the main shuffler and for outputting cards in a substantially random order.

35. A device for shuffling cards comprising:  
a platform of compartments, and  
a main shuffler,  
the platform of compartments comprising, a plurality of  
compartments for holding groups of playing cards in each  
compartment of the platform to be shuffled; and an output  
portion of the platform of compartments, the output portion  
delivering one group of cards at a time to an input portion of the  
main shuffler, the main shuffler for rearranging the order of  
cards input into the main shuffler from the platform of  
compartments and for outputting cards in a substantially  
random order, and the output portion selecting single groups of  
cards within a single compartment to be randomly delivered to  
the input portion of the main shuffler.

The Examiner cites the following documents as evidence of  
unpatentability:

Fineman	US 3,944,230	Mar. 16, 1976
Johnson	US 6,676,127 B2	Jan. 13, 2001

The following rejections are before us for review:

Claims 1-3, 5, 6, 11, 15, 25-27, 29, 30, and 33-38 stand rejected under  
35 U.S.C. § 102(e) as being anticipated by Fineman (Ans. 4-5).

Claims 4, 7-10, 12-14, 28, 31, and 32 stand rejected under 35 U.S.C. §  
103(a) as being obvious in view of Fineman and Johnson (Ans. 5-6).

#### ANTICIPATION -- FINEMAN

##### *ISSUE*

The Examiner finds that Fineman anticipates the asserted claims  
because “Fineman teaches a device that has an inner case a platform with a  
plurality of compartments (pre-shuffler) and an outer case (main shuffler)  
for aligning and the outputting cards (see abstract and figures 1 and 2)”  
(Ans. 5).

Appellants contend, among other things, that the claims subject to this ground of rejection require the device to have the distinct components of both a pre-shuffler and a main shuffler that outputs the pre-shuffled cards in a substantially random order (App. Br. 13). However, Appellants argue, **“there are no two distinct components of a pre-shuffler and a shuffler in Fineman”** (*id.*).

In view of the respective positions advanced by Appellants and the Examiner, the issue with respect to this rejection is whether the Examiner erred in finding that Fineman’s device includes a pre-shuffler as well as a main shuffler capable of rearranging the pre-shuffled cards and outputting them in a substantially random order.

*FINDINGS OF FACT (“FF”)*

1. Fineman discloses “a card shuffler which automatically divides the pack into a plurality of substantially equal portions and recombines the playing cards in an order different from that in which the deck was originally arranged” (Fineman, col. 1, ll. 5-9).
2. Figure 1 of Fineman, reproduced below, “is a perspective view of the card shuffler with an illustrative deck of cards inserted therein” (Fineman, col. 2, ll. 17-18):

FIG. 1

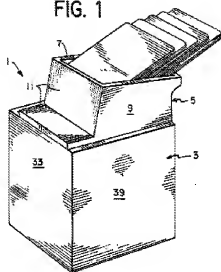


Figure 1 shows “[c]ard shuffler 1 [which] comprises an outer rectangular case 3 and a substantially rectangular inner case 5. Inner case 5 is slidably disposed in outer case 3” (Fineman, col. 2, ll. 32-35).

3. Figure 2 of Fineman, reproduced below, “is a cross-sectional side elevation of the card shuffler” (Fineman, col. 2, ll. 19-20):

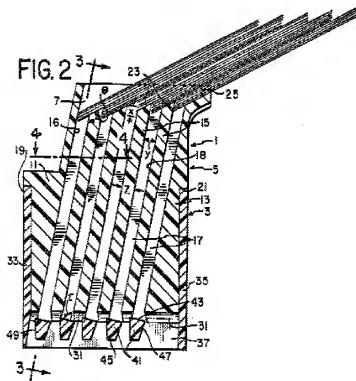


Figure 2 shows:

Inner case 5 comprises side walls 7 and 9, front wall 11 and back wall 13. Running from side wall 7 to side wall 9 are a plurality of separators 15. Separators 15 divide the interior of inner case 5 into a plurality of compartments 17. Each compartment is defined by a front surface 16 and rear surface 18.

(Fineman, col. 2, ll. 36-42.)

4. Figure 6 of Fineman, reproduced below, “is a side cross-sectional view of the card shuffler illustrating a particular moment during its operation” (Fineman, col. 2, ll. 26-28):

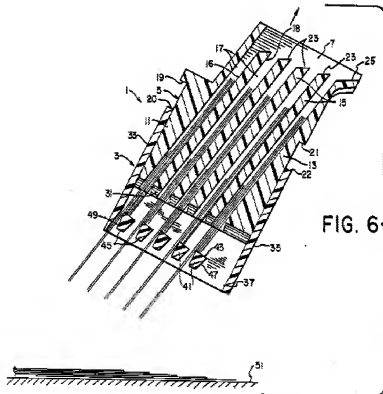


Figure 6 shows “[c]ard shuffler 1 . . . lifted from the surface of the table [51] and held at approximately a 45° angle . . . [w]hile . . . the inner case 5 is slowly slid out of outer case 3” (Fineman, col. 5, ll. 1-4).

As also seen in Figure 6, “[n]ear the bottom of outer case 3 a plurality of runners 41 extend from side wall 37 to side wall 39” (*id.* at col. 3, ll. 46-48).

5. Fineman describes the function of its shuffler in the context of Figure 6 as follows:

As inner case 5 moves out of outer case 3, back surface 18 of each of the compartments 17 forces the playing cards in compartment 17 forward, eventually causing the forwardmost card in compartment 17 over the forward edge of face 43. At substantially the same instant the first card (the card closest to front surface 16 of the respective compartments 17) from each of the compartments 17 will be ejected. Similarly, the remaining cards will be ejected from each of the compartments 17, one card at a time from each compartment 17 at substantially the same instant. The cards will fall onto the table surface 51.

(Fineman, col. 5, ll. 6-18.)

6. Regarding Figure 6, Fineman further states that “the first card from each compartment 17 is shown as they landed on table surface 51. Also shown is the second card from each compartment in the process of being ejected from card shuffler 1. The remaining unshuffled playing cards are shown in their respective compartments 17” (Fineman, col. 5, ll. 19-24).

#### *PRINCIPLES OF LAW*

“[T]he examiner bears the initial burden . . . of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992).

It is well settled that, “[t]o anticipate a claim, a prior art reference must disclose every limitation of the claimed invention, either explicitly or inherently.” *In re Schreiber*, 128 F.3d 1473, 1477 (Fed. Cir. 1997).

It is also well settled that “[t]here is nothing intrinsically wrong with [defining something by what it does rather than what it is] in drafting patent claims.” *Id.* at 1478 (quoting *In re Swinehart*, 439 F.2d 210, 212 (CCPA 1971)).

However, “[f]unctional’ terminology may render a claim quite broad . . . [;] a claim employing such language covers *any and all* embodiments which perform the recited function.” *Swinehart*, 439 F.2d at 213; *see also Schreiber*, 128 F.3d at 1478-79 (holding that a prior art apparatus meeting all claimed structural limitations was anticipatory because it was inherently capable of performing the claimed function).

#### ANALYSIS

We agree with Appellants that the Examiner has not made a *prima facie* case that Fineman anticipates the rejected claims.

Claim 1 recites, for shuffling cards, a device comprised of a pre-shuffler and a main shuffler. The pre-shuffler has a plurality of compartments for holding groups of playing cards, and an output portion. The output portion of the pre-shuffler delivers one group of cards at a time to an input portion of the main shuffler, the groups of cards being delivered to the main shuffler in a different order than the order inputted into the pre-shuffler, with each group of cards being input separately as an entire group.

Claim 1 recites that the main shuffler “rearranges the order of cards input into the main shuffler and output[s the] cards in a substantially random order.”

Independent claim 25 recites a device similar to claim 1, including a pre-shuffler, and a main shuffler that is “capable of rearranging the order of the groups of multiple cards input into the main shuffler and for outputting cards in a substantially random order.”

Independent claim 35 also recites a card shuffling device, with a “platform of compartments” instead of a pre-shuffler. Like claims 1 and 25, however, claim 35’s device also has a “main shuffler for rearranging the order of cards input into the main shuffler from the platform of compartments and for outputting cards in a substantially random order.”

The Examiner finds that Fineman’s device is encompassed by the claims because the claimed pre-shuffler reads on Fineman’s inner case (5), with its plurality of compartments, and the claimed main shuffler reads on the outer case (3), which aligns and outputs the playing cards (*see* Ans. 5). We do not agree.

As noted, each of the independent claims requires the main shuffler to be capable of rearranging the order of cards put into it, such that the cards are outputted from the main shuffler in a substantially random order. We note that the outer case 3 of Fineman’s shuffler contains runners 41 that allow only the forwardmost card of each group of cards in the inner case to pass through to the table (*see* FF 3-6).

However, the outer case does not rearrange the cards in a substantially random order, as required by the claims. Rather, the first card fed into the outer case will always be the first card output to the table. Also, each “batch” of cards output to the table always consists of the top card from each of the groups in the compartments in the inner case (*see* Fineman, col. 5, ll. 19-24 (“[T]he first card from each compartment **17** is shown as they landed

on table surface 51.”); *see also* FF 5, 6). We therefore do not agree with the Examiner that the outer case of Fineman’s device is capable of outputting cards in a substantially random order, as required by independent claims 1, 25, and 35.

The Examiner argues that Appellants “seem[] to be arguing subject matter that is not properly being claimed” (Ans. 6). Specifically, the Examiner urges, Appellants “seem[] to be arguing the function of his invention. Examiner notes that applicant has presented apparatus claims only. The method by which cards are inserted into applicant’s device is given no weight at this juncture” (*id.*).

We are not persuaded by this argument. It may be true that Appellants’ arguments are directed to functional limitations. However, for an apparatus to meet a functional limitation, the apparatus must be capable of performing the claimed function. *See In re Swinehart*, 439 F.2d at 213; *see also Schreiber*, 128 F.3d at 1478-79. In the instant case, for the reasons discussed above, we do not see, and the Examiner has not explained, how Fineman’s device meets the limitations directed to the main shuffler.

In sum, we agree with Appellants that the Examiner erred in finding that Fineman’s device includes a pre-shuffler as well as a main shuffler capable of rearranging the pre-shuffled cards and outputting them in a substantially random order. Because Fineman’s device does not meet all of the limitations of claims 1, 25, and 35, we reverse the Examiner’s rejection of those claims, and their dependent claims 2, 3, 5, 6, 11, 15, 25-27, 29, 30, and 33-38, as anticipated by Fineman.

## OBVIOUSNESS

### ISSUE

Claims 4, 7-10, 12-14, 28, 31, and 32 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Fineman and Johnson (Ans. 5-6).

Regarding claims 4 and 28, the Examiner concedes that “Fineman fails to teach horizontal movement of his cards with respect to the input portion of the main shuffler” (Ans. 5). To meet that limitation, the Examiner cites Johnson as teaching “lateral movement of his cards during delivery (see col. 2, lines 7-14)” (*id.*). Based on these teachings, the Examiner concludes that “[i]t would have been obvious to one of ordinary skill in the art to modify Fineman to include lateral (side to side or horizontal) movement to add variety to the card handling process” (*id.*).

Regarding claims 7-10, 12-14, 31, and 32, the Examiner concedes that “Fineman fails to teach a rack that rotates,” and cites Johnson’s teaching of “a carousel mechanism, with multiple compartments, which rotates in the card handling process” to meet that limitation (*id.*). The Examiner concludes that “[i]t would have been obvious to modify Fineman to include a rotating mechanism to add variety to his device” (*id.* at 6).

### Appellants contend:

There is not any reasonable nexus for asserting it would be obvious to physically attach and align the shuffler of Fineman (which must deliver cards onto a flat, extended surface to work) with the shuffler of Johnson. In addition, the two distinct shufflers cannot be combined in any obvious method that would enable each to provide its own required functions. Fineman drops multiple cards along an extended flat surface, which is not existent as an entry feature of the shuffler of Johnson. It is physically impossible to combine the two

shufflers of Fineman and Johnson without some drastic and undefined alteration of the structure of both shufflers.

(App. Br. 17 (emphasis removed).)

In view of the respective positions advanced by Appellants and the Examiner, the issue with respect to this rejection is whether the Examiner has made a prima facie case that the cited references would have prompted a person of ordinary skill in the art to incorporate a horizontal card movement as recited in claim 4, or a rotating mechanism as required by claim 7, into Fineman's card shuffling device.

*FINDINGS OF FACT*

7. Claim 4 recites:

4. The device of claim [1 wherein the pre-shuffler comprises an input card holder segmented into the compartments, the card holder being moveable with respect to the input portion of the main shuffler for delivering one group of cards at a time to the input portion of the main shuffler; and]

wherein the input card holder is moved substantially horizontally by a motor drive to position a group of cards with respect to the input portion of the main shuffler.

(App. Br. 19 (incorporating the language of claim 3).)

8. Claim 7 recites:

7. The device of claim [1 wherein the pre-shuffler comprises an input card holder segmented into the compartments, wherein a group of cards in the pre-shuffler is positioned with respect to the input portion of the main shuffler for allowing the group of cards to be deposited into the input portion of the main shuffler,

[t]he device . . . further comprising a platform supporting the input card holder, the platform having an opening, the holder being movable relative to the platform to allow a group of cards to be



Figure 2 shows “collating apparatus **10** for providing sorted and/or shuffled decks of playing cards from a stack of cards **11** [which] includes holding means **12** for holding the cards in a vertical column **13** above card feeder **14** which feeds the lowermost card of the stack past the sensor **15**” (Johnson, col. 3, ll. 29-33).

11. To sort or shuffle the inputted cards, the “sensor is coupled to a microprocessor 16 to record either the presence of a card and/or the identity of a card by its suit and value” (*id.* at col. 3, ll. 33-35). Microprocessor 16, in turn, is coupled to drive motors 35 and 36 of feed means 14, as well as a “drive means (not shown) for transverse movement of each carriage **18**, card transport drives **37** associated with carriages **18**, magazine drives **22** and drive **33** associated with unloading conveyors **31** for selective coordinated operation to collate packs of shuffled or sorted cards” (*id.* at col. 3, ll. 42-47).

12. Fineman discloses that “[p]rior art card shufflers have suffered from numerous faults, of which the principal fault is extreme complexity. Such complexity generally results in a device disproportionally expensive and overly sensitive to mechanical failures” (Fineman, col. 1, ll. 12-16).

13. Fineman discloses that one object of its invention is “to obtain a mechanical card shuffler without unnecessary mechanical complexity. . . .

It is another object of this invention to obtain a mechanical card shuffler that divides an unshuffled deck into substantially equal parts without moving elements (*id.* at col. 1, ll. 41-49).

14. Fineman discloses that “[i]t is yet another object of the present invention to attain the foregoing objects in a simple, inexpensive and easily constructed device” (*id.* at col. 1, ll. 50-52).

*PRINCIPLES OF LAW*

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992).

In *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007), the Supreme Court rejected a “rigid approach” to the obviousness question, and instead emphasized that “[t]hroughout this Court’s engagement with the question of obviousness, our cases have set forth an expansive and flexible approach . . . .” *Id.* at 415. The Court also rejected the use of “rigid and mandatory formulas” as being “incompatible with our precedents.” *Id.* at 419; *see also id.* at 421 (“Rigid preventative rules that deny factfinders recourse to common sense, however, are neither necessary under our case law nor consistent with it.”).

The Court thus reasoned that the analysis under 35 U.S.C. § 103 “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 418; *see also id.* at 421 (“A person of ordinary skill is . . . a person of ordinary creativity, not an automaton.”).

While it emphasized a flexible approach, the Court nonetheless reaffirmed that “a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 418.

Rather, as the Court stated:

[I]t can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements *in the way the claimed new invention*

*does . . . because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.*

*Id.* at 418-419 (emphasis added); *see also id.* at 418 (requiring a determination of “whether there was an apparent reason to combine the known elements *in the fashion claimed by the patent at issue*”) (emphasis added).

Accordingly, as our reviewing court has stated, “obviousness requires a suggestion of all limitations in a claim.” *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)).

#### ANALYSIS

We agree with Appellants that the Examiner has not made a *prima facie* case that the cited references would have prompted a person of ordinary skill in the art to incorporate a horizontal card movement as recited in claim 4, or a rotating mechanism as required by claim 7, into Fineman’s card shuffling device.

With respect to claim 4, the Examiner reasons that a person of ordinary skill would have been prompted to add Johnson’s horizontal feeder 14 (*see* FF 10) to Fineman’s device “to add variety to the card handling process” (Ans. 5). Regarding claim 7, the Examiner similarly concludes that an ordinary artisan would have considered it obvious to include Johnson’s rotating carousel as part of Fineman’s card shuffler, “to add variety to his device” (*id.*).

The evidence of record does not support the Examiner's position. Fineman explicitly states that its objective is to provide a way to shuffle cards using a device "without unnecessary mechanical complexity" and "without moving elements" (Fineman, col. 1, ll. 41-49 (FF 13; *see also* FF 12, 14)).

In contrast, by including Johnson's horizontal feeder as part of Fineman's device, one would be adding two mechanical drive motors 35 and 36, as well as a transport drive 37, and a series of multiple rollers (*see* FF 10). Including Johnson's rotating carousel would further add not only the carousel itself, but also magazine drive 22, as well as the associated unloading drive 33 and conveyors 31 (*see* FF 10, 11).

Given Fineman's disclosure that its intent in preparing its shuffling device was to produce a simple device without complex moving parts, we do not agree with the Examiner that a person of ordinary skill in the art would have been prompted to include Johnson's relatively complex motor-driven card-feeder 14, and sorter 25, as parts of Fineman's device. Moreover, the Examiner points to no evidence of record suggesting that an ordinary artisan would have inferred that it would be desirable, or even suitable, to add variety or complexity to Fineman's card handling device.

We therefore reverse the Examiner's rejection of claims 4 and 7 as being obvious in view of Fineman and Johnson. Claim 28 recites essentially the same limitations as claim 4 with respect to a motor-driven horizontal feeder, and claim 31 recites essentially the same limitations as claim 7. We therefore also reverse the Examiner's rejection of claims 28 and 31 as being obvious over these references.

Claims 12 and 13 essentially recite that the device has rotating rollers in the main shuffler input portion. Claim 14 recites that the main shuffler has a plurality of moveable card receptacles that are aligned using a controllable drive. While it may be true that Johnson discloses these elements, for the reasons discussed above, we do not agree with the Examiner that a person of ordinary skill in the art would have been prompted to add these complicating mechanical components to Fineman's simplified shuffling device. We therefore reverse the Examiner's rejection of claims 12-14 as being obvious over Fineman and Johnson.

Claims 8-10 depend directly from claim 1, and claim 32 depends directly from claim 25. While the Examiner included claims 8-10 and 32 in the obviousness rejection, the Examiner failed to explain why the limitations of those claims are obvious in view of the cited references.

Moreover, as noted above, we are not persuaded that Fineman anticipates claims 1 and 25. Because the Examiner has not explained how Johnson remedies the deficiencies of Fineman with respect to claims 1 and 25, we are compelled to conclude that the Examiner has not made a prima facie case of obviousness with respect to their dependent claims 8-10 and 32. We therefore reverse the Examiner's obviousness rejection of claims 8-10 and 32.

#### SUMMARY

We reverse the Examiner's rejection of claims 1-3, 5, 6, 11, 15, 25-27, 29, 30, and 33-38 under 35 U.S.C. § 102(e) as being anticipated by Fineman.

We reverse the Examiner's rejection of claims 4, 7-10, 12-14, 28, 31, and 32 under 35 U.S.C. § 103(a) as being obvious in view of Fineman and Johnson.

REVERSED

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